CHACAL 2024: Computing in HEP and Applications CNRS-Africa Lectures

15-27 Jan 2024, University of Witwatersrand, Johannesburg, South Africa

A **new school** funded by CNRS France-Africa international cooperation programme.
- **Monte Carlo** methods and **Event Generator** masterclasses
- **Re-interpretation** tools
- **Machine learning**: from basics to expert use, in HEP and beyond
- **Quantum computing** in HEP

- Aimed at **PhD students in HEP** (early postdocs and advanced masters students considered)
- **Lecturers from leading universities** in European and South Africa
- **No registration fee**
- **Meals** and **accommodation provided**
- **Bursaries available** for travel for students from within Africa

More info and sign-up!

Image create by DALL-E using prompt: "a jackal face composed of a web of thousands of colourful data connections"

Organising committee:
Deepak Kar (Witwatersrand, ZA)
Louie Corpe (Clermont-Ferrand, FR)

Want to learn more?

Experimental
Particle Physics
Understanding the measurements and
searches at the Large Hadron Collider

Deepak Kar

IOP ebooks

If you can't access
online, ask me ;-)

Hi, I'm Louie

Born in London, brought up in the **south of France**

2007: **MSci in Mathematics and Physics** at University college London

2011: **Two years in digital marketing** start-up "Efficient Frontier" bought up by Adobe.

2013-2017: **PhD on Higgs decays to photons** at CMS at Imperial College London

2017-2021: **Post-doc at University College London,** on the ATLAS experiment

2021-2022: **CERN fellowship,** on ATLAS and the Hugh Granularity Timing Detector upgrade

2022-now: **Junior Professor** at Université Clermont Auvergne and Laboratoire de Physique de Clermont

LECTURE THEATRE

I'D LIKE TO HELP YOU HELP ME PLEASE LOOK AT MY MINIMAL WORKING EXAMPLE

- I have an issue with the print function
- This is a standalone C++ code where I have isolated the issue

```
int main (){
    int current_year = 2023;
    printf(current_year, "%d");
    return 0;
}
```

- You can reproduce my error if you "Build task" in Visual Studio Code with g++11 on a mac with Big Sur OS and an Intel chip

This way a demonstrator can just copy paste the code, look at your error with the compiler, and advise on what's going wrong!

https://stackoverflow.com/help/minimal-reproduc

Caterina Doglioni, PHYS30762 - OOP in C++ 2023, Lecture 3

FREQUENTST STATISTICS

Basic concepts: statistical hypothesis

- A statistical hypothesis is a **formal** claim about a state of nature structured within the framework of a statistical model.
- To be useful and scientific, it should come with a prediction for an experiment so that the hypothesis can be tested.
- As **results may vary** the prediction should be **probabilistic**
- **Simple hypothesis** - everything about the prediction is specified